

CARLO GAVAZZI
Automation Components

WM40 96
WM30 96

Smart Power Quality Analyzer

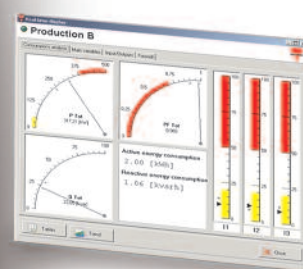


CARLO GAVAZZI

DISAI

Automatic Systems

T. 962 448 450 www.disai.net



Control



**Communication
Capabilities**



**Space
Optimization**



**Inventory
Reduction**



**Application
Durability**

WM40-96 and WM30-96 Providing Superior Performance and Accuracy

WM40-96

WM40-96 is the result of a synthesis of the latest in today's cutting edge technology, providing many distinctive features which offer unparalleled benefits to the user.



*Most applications require a meter,
whereas WM40-96 and WM30-96 are meters for most applications:*



- Complex cost and power analysis
- Cost and power quality analysis
- Advanced energy and power analysis for power generation and solar applications



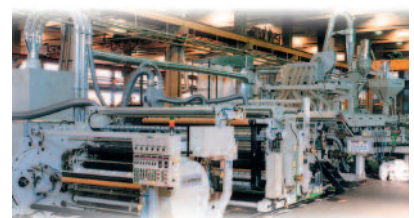
Carlo Gavazzi has improved its range of modular power analyzers by introducing the WM40-96 and WM30-96 Series Smart Power Analyzer. These instruments are the result of over ten years experience in designing, manufacturing and selling Power analysers and Energy Meters.

WM30-96

WM30-96 is an innovative device providing, with its distinguishing features and smart functions, application-oriented solutions to the user.

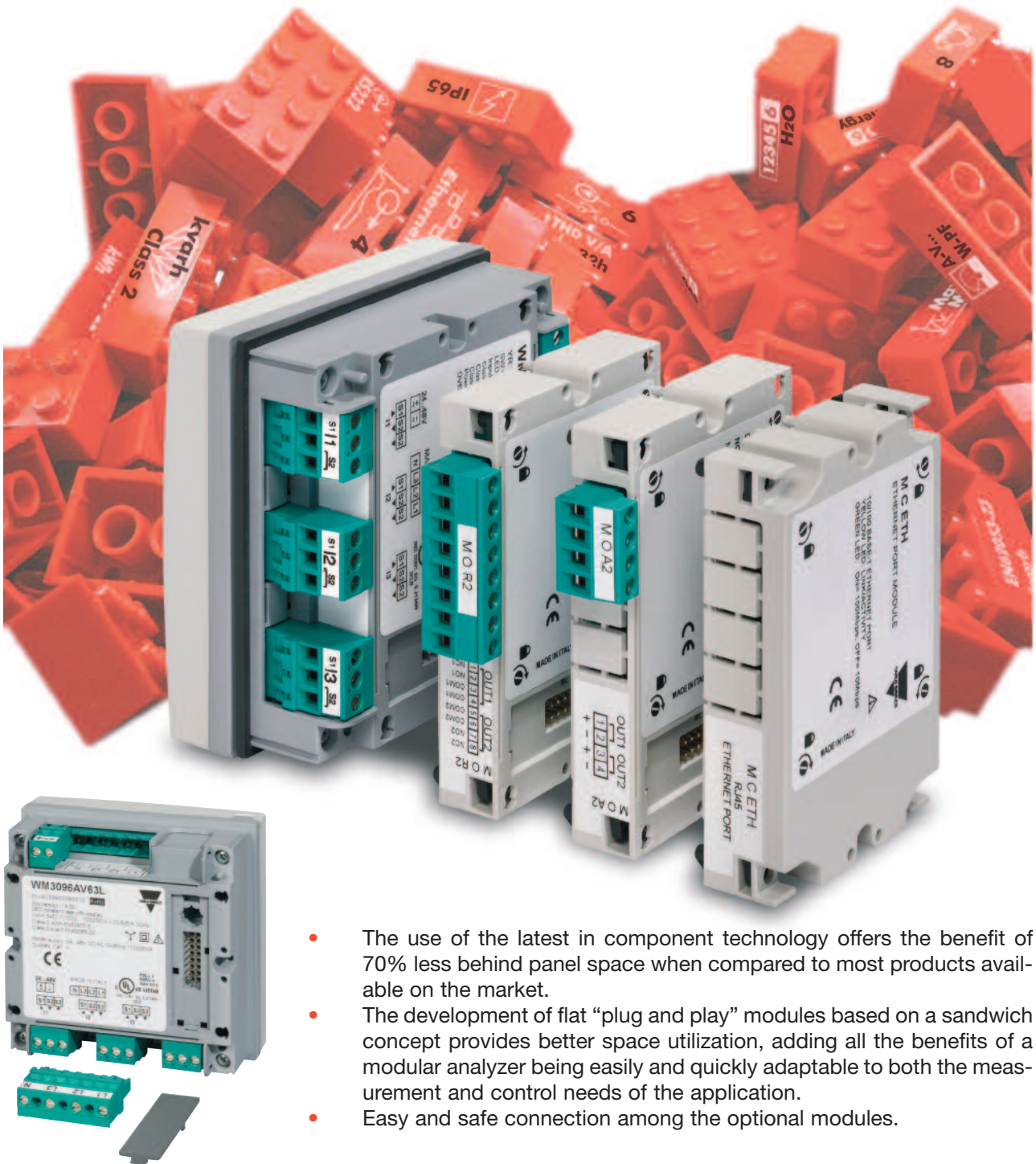


- Cost allocation
- Cost control
- Complex cost allocation



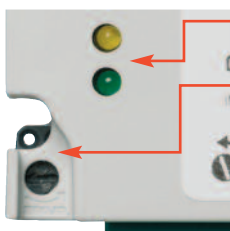


Make your own instrument: build up its features!



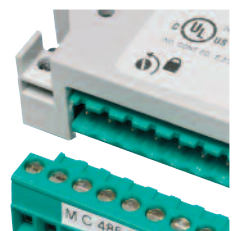
- The use of the latest in component technology offers the benefit of 70% less behind panel space when compared to most products available on the market.
- The development of flat “plug and play” modules based on a sandwich concept provides better space utilization, adding all the benefits of a modular analyzer being easily and quickly adaptable to both the measurement and control needs of the application.
- Easy and safe connection among the optional modules.

The modules advantages simplifies the mounting procedure



- LED's to check the status of the communication port.
- Anti-tamper feature, all the module can be sealed to the box.

- Detachable connectors for a simplified wiring.



WM30/40-96 Display and Touch Pad

- All necessary information is available at a glance on the home screen, which is configurable by the user.
- Actual power vs. installed power is available all the time to have immediate evidence of a power overload condition.
- High energy metering resolution together with ten digits total energy counting, providing the ideal solution for medium and high voltage applications.
- An innovative front touchpad is a significant improvement over the commonly used membrane push buttons. It allow the user to easily enter into one of the four main variable areas: energy metering, variable reading, power and harmonic analysis.



WM40-96 Optical Port and Meters

- An ANSI type 2 optical port is available as a standard on the front, allowing to communicate with a PC or a laptop in easy and fast way.
- Simple connection with the unit without opening the panel door in order to read or modify its programming parameters or to download the stored data and information.
- The level of each single phase displayed variable is immediately evident by the bar-graphs which, by means of 3-colour LED's, provide an intuitive picture of the variable values compared with programmable full-scale.



Advanced display backlight



- The white backlight and wide viewing angle assure good visibility of the data.
- 3 possible backlight selection (white and blue colours or no backlight).
- White and blue alternating backlight to let the alarm be visible for away from the instrument.

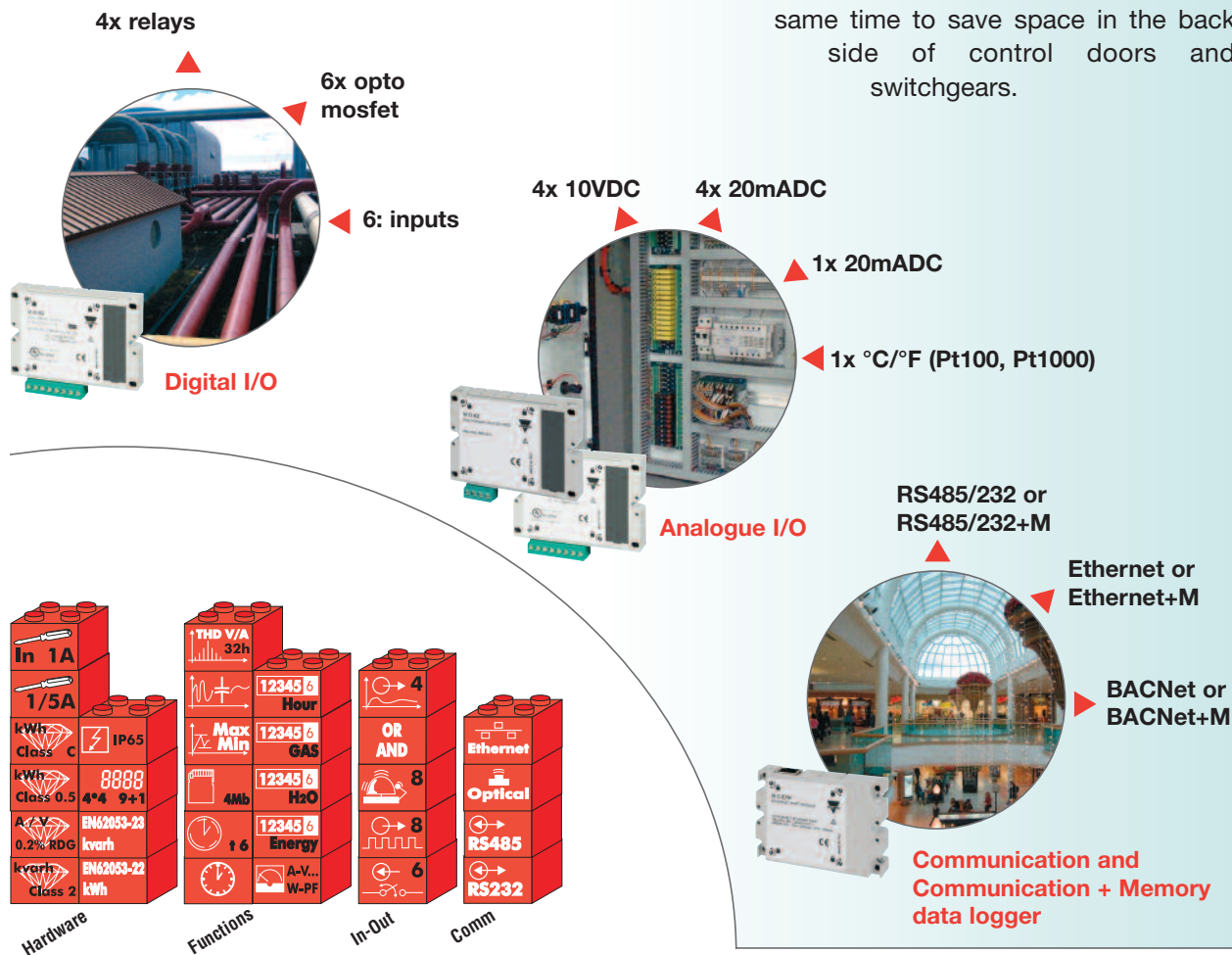


WM40-96 Some Features

- Energy measurements according to EN62053-22 (class 0.5) and ANSI C12.20, CA 0.5, ANSI C12.1 (revenue grade)
- Accuracy $\pm 0.2\%$ RDG (current/voltage)
- System variables: V_{LL} , V_{LN} , A, VA, W, var, PF, Hz, Phase sequence, asymmetry, loss
- Single phase variables: V_{LL} , V_{LN} , AL, An (calculated), VA, W, var, PF
- 4Mb memory for data event stamping and load profiling (optional)
- Freely configurable virtual alarms with OR/AND logic (optional)
- Modbus RTU (available also via ANSI type 2 optical port), Modbus TCP and BACnet-IP ports (optional)
- Universal power supply



WM40-96 Modules advantages: with its innovative basic unit and plug in modules, WM40-96 can adapt itself to any possible application need, allowing at the same time to save space in the back side of control doors and switchgears.



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- Single phase variables: V_{LL} , V_{LN} , AL, An (calculated), VA, W, var, PF
- Harmonic analysis (FFT) up to the 32 harmonic.
- Application adaptable display and programming procedure (Easy prog. function)
- Modbus RTU, Modbus TCP and BACnet-IP ports (optional)
- Universal power supply



WM30-96 Modules advantages: thanks to its plug in modules that can be easily added to the streamlined modules basic unit to exactly fit the customer requirements, WM30-96 becomes an extremely flexible solution that can be used in a countless numbers of applications.

2x relays

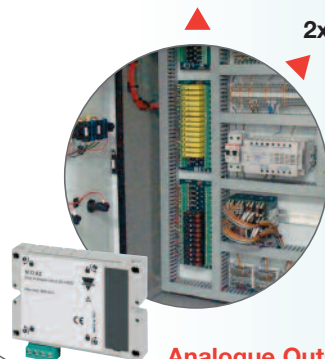
2x opto mosfet



Digital Outputs

2x 10VDC

2x 20mADC



Analogue Outs

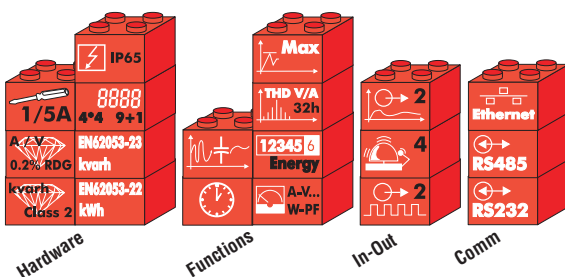
RS485/232

Ethernet

BACNet



Communication



Smart Power Quality analysers

PowerSoft

PowerSoft Energy Management software offers more power and functionality to the WM40-96 and WM30-96, providing the application with the following features:

- **Interactive synoptic:** showing the exact position and the purpose of the meters in the installation.
- **Real time measurements:** displaying the basic variables such as analogue and bargraph type indications.
- **Trends:** displaying the selected variables by comparing them to another one, to further understand their behaviour over time.
- **Cost management:** estimating your energy consumption costs over a time period and by tariff.
- **Statistical analysis:** providing a very powerful statistical analysis tool of your power and energy usage, which lets you negotiate a better utility rate.
- **Alarms and events:** all variables and events can be time stamped.
- **Internet connectivity:** providing the main variables via integration to a web server. This can send out warning emails as any alarm condition occurs.



The accessories that complete the WM40-96 solutions



OPTOUSB1

OPTOUSB1 is the ANSI type 2 probe to interface WM40-96 optical port utilizing infra-red light. Connected to a PC through its USB standard "A" plug (USB1.1 and USB 2.0 compliant) it permits galvanic isolated communication to WM40, for reading or programming parameters through the dedicated software Wm40Soft, maintaining at the same time on IP65 front. Virtual serial port drivers are included for operating systems up to Windows 7.

Function and Features

The main differences between the two analysers

**Compare and
refine your
choice**

	WM40	WM30
• Class 0.5 (kWh) according to EN62053-22	●	●
Class C (kWh) according to EN50470-3	●	●
Class 2 (kvarh) according to EN62053-23	●	●
Energy measurements acc. to ANSI C12.20, CA 0.5, ANSI C12.1 (revenue grade)	●	●
Accuracy $\pm 0.2\%$ RDG (current/voltage)	●	●
Instantaneous variables readout: 4x4 DGT	●	●
Energies readout: 9+1 DGT	●	●
System variables: VLL, VLN, A, VA, W, var, PF, Hz, phase-sequence, asymmetry and loss	●	●
Single phase variables: VLL, VLN, AL, An (calculated) VA, W, var, PF	●	●
Average and max values of all the system and single-phase variables	●	●
Average, min and max values of all the system and single-phase variables	●	
Direct neutral current measurement (on request)	●	
Four quadrant energy measurements	●	
Total harmonic distortion (THD) and total demand distortion (TDD) calculation	●	
Gas, cold water, hot water, remote heating measurements (on request)	●	
K-factor (North America) and factor K (Europe) calculation	●	
Harmonic analysis (FFT) up to the 32nd h. with harmonics source detection	●	●
Run hours counter (8+2 DGT)	●	●
Real time clock function	●	●
Application adaptable display and programming procedure (Easyprog function)	●	●
Universal power supply (19 to 60VAC, 21.6 to 60VDC and 90 to 265VAC/VDC)	●	●
RS232 or RS485 port	●	●
MODBUS TCP/IP Ethernet port	●	●
BACnet-IP over Ethernet port	●	●
Data stamping of up to 10,000 events	●	
Optical front communication port (ANSI type 2)	●	
Programming software	●	
AND/OR logic on virtual alarm	●	
Digital inputs	6	
Static outputs	8	
Relay outputs	6	2
Freely configurable virtual alarms	16	4
Analogue outputs (+20mA, +10VDC)	4	2

OUR SALES NETWORK IN EUROPE

AUSTRIA - Carlo Gavazzi GmbH
Ketzergrasse 374, A-1230 Wien
Tel: +43 1 888 4112
Fax: +43 1 889 10 53
office@carlogavazzi.at

BELGIUM - Carlo Gavazzi NV/SA
Schaarbeeklei 213/3, B-1800 Vilvoorde
Tel: +32 2 257 4120
Fax: +32 2 257 41 25
sales@carlogavazzi.be

DENMARK - Carlo Gavazzi Handel A/S
Over Hadstenvej 40, DK-8370 Hadsten
Tel: +45 89 60 6100
Fax: +45 86 98 15 30
handel@gavazzi.dk

FINLAND - Carlo Gavazzi OY AB
Petäskentie 2-4, FI-00661 Helsinki
Tel: +358 9 756 2000
Fax: +358 9 756 20010
myynti@carlogavazzi.fi

FRANCE - Carlo Gavazzi Sarl
Zac de Paris Nord II, 69, rue de la Belle
Etoile, F-95956 Roissy CDG Cedex
Tel: +33 1 49 38 98 60
Fax: +33 1 48 63 27 43
french.team@carlogavazzi.fr

GERMANY - Carlo Gavazzi GmbH
Rudolf-Diesel-Strasse 23,
D-64331 Weiterstadt
Tel: +49 6151 81000
Fax: +49 6151 81 00 40
info@gavazzi.de

GREAT BRITAIN - Carlo Gavazzi UK Ltd
7 Springlakes Industrial Estate,
Deadbrook Lane, Hants GU12 4UH,
GB-Aldershot
Tel: +44 1 252 339600
Fax: +44 1 252 326 799
sales@carlogavazzi.co.uk

ITALY - Carlo Gavazzi SpA
Via Milano 13, I-20020 Lainate
Tel: +39 02 931 761
Fax: +39 02 931 763 01
info@gavazziacbu.it

NETHERLANDS - Carlo Gavazzi BV
Wijkmeeweg 23,
NL-1948 NT Beverwijk
Tel: +31 251 22 9345
Fax: +31 251 22 60 55
info@carlogavazzi.nl

NORWAY - Carlo Gavazzi AS
Melkeveien 13, N-3919 Porsgrunn
Tel: +47 35 93 0800
Fax: +47 35 93 08 01
gavazzi@carlogavazzi.no

PORTUGAL - Carlo Gavazzi Lda
Rua dos Jerónimos 38-B,
P-1400-212 Lisboa
Tel: +351 21 361 7060
Fax: +351 21 362 13 73
carlogavazzi@carlogavazzi.pt

SPAIN - Carlo Gavazzi SA
Avda. Iparraguirre, 80-82,
E-48940 Leioa (Bizkaia)
Tel: +34 94 480 4037
Fax: +34 94 480 10 61
gavazzi@gavazzi.es

SWEDEN - Carlo Gavazzi AB
V:a Kyrkogatan 1,
S-652 24 Karlstad
Tel: +46 54 85 1125
Fax: +46 54 85 11 77
info@carlogavazzi.se

SWITZERLAND - Carlo Gavazzi AG
Verkauf Schweiz/Vente Suisse
Sumpfstrasse 32,
CH-632 Steinhausen
Tel: +41 41 747 4535
Fax: +41 41 740 45 40
info@carlogavazzi.ch

OUR SALES NETWORK IN NORTH AMERICA

USA - Carlo Gavazzi Inc.
750 Hastings Lane,
USA-Buffalo Grove, IL 60089,
Tel: +1 847 465 6100
Fax: +1 847 465 7373
sales@carlogavazzi.com

CANADA - Carlo Gavazzi Inc.
2660 Meadowvale Boulevard,
CDN-Mississauga Ontario L5N 6M6,
Tel: +1 905 542 0979
Fax: +1 905 542 22 48
gavazzi@carlogavazzi.com

MEXICO - Carlo Gavazzi Mexico S.A. de C.V.
Calle La Montaña no. 28, Fracc. Los Pastores
Naucalpan de Juárez, EDOMEX CP 53340
Tel & Fax: +52.55.5373.7042
mexicosales@carlogavazzi.com

OUR SALES NETWORK IN ASIA AND PACIFIC

SINGAPORE - Carlo Gavazzi Automation
Singapore Pte. Ltd.
61 Tai Seng Avenue #05-06
UE Print Media Hub
Singapore 534167
Tel: +65 67 466 990
Fax: +65 67 461 980

MALAYSIA - Carlo Gavazzi Automation
(M) SDN. BHD.
D12-06-G, Block D12,
Pusat Perdagangan Dana 1,
Jalan PUJ 1A/46, 47301 Petaling Jaya,
Selangor, Malaysia.
Tel: +60 3 7842 7299
Fax: +60 3 7842 7399

CHINA - Carlo Gavazzi Automation
(China) Co. Ltd.
Rm. 2308 - 2310, 23/F.,
News Building, Block 1,
1002 Shennan Zhong Road,
Shenzhen, China
Tel: +86 755 83699500
Fax: +86 755 83699300

HONG KONG - Carlo Gavazzi
Automation Hong Kong Ltd.
Unit 3 12/F Crown Industrial Bldg.,
106 How Ming St., Kowloon,
Hong Kong
Tel: +852 23041228
Fax: +852 23443689

OUR COMPETENCE CENTRES & PRODUCTION SITES

Carlo Gavazzi Industri A/S
Hadsten - **DENMARK**

Carlo Gavazzi Ltd
Zejtun - **MALTA**

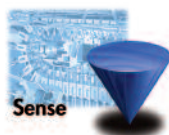
Carlo Gavazzi Controls SpA
Belluno - **ITALY**

Uab Carlo Gavazzi Industri Kaunas
Kaunas - **LITHUANIA**

Carlo Gavazzi Automation
(Kunshan) Co., Ltd.
Kunshan - **CHINA**

HEADQUARTERS

Carlo Gavazzi Automation SpA
Via Milano, 13 - I-20020
Lainate (MI) - **ITALY**
Tel: +39 02 931 761
info@gavazzi-automation.com



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Further information on
www.gavazzionline.com - www.carlogavazzi.com

